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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,262

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Fumiki Murakami

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EXAMINER

NGUYEN, HAIDUNG D

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

12/01/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/575,262	Applicant(s) MURAKAMI, FUMIKI	
	Examiner Haidung D. Nguyen	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/15/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to applicant's amendment filed 8/6/09.
2. Claims 1 and 3-24 are currently pending.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1, 3-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakacho et al (WO 00/09518) in view of Kao (4,065,546). U.S. Patent No 6,528,559, which is the U.S. Nation Stage of the Nakacho reference, is used as translation.

Regarding claims 1, 3, 4, Nakacho discloses a flame retardant composition which comprises: (A) at least one compound selected from the group consisting of (A-1) a metal oxide represented by the formula M_xO_y (in the formula, M is at least one element selected from the elements of Groups 5, 8, 10 and 11 of the Periodic Table, and x and y are numerals satisfying $0 < x \leq 5$ and $0 < y \leq 5$, respectively) (col 11, ln 60-61) and (A-2) a trivalent phosphorus compound (triphenyl phosphine - col 10, ln 66-67); and (B) at least one phosphazene, wherein the flame retardant composition contains 0.1-60 parts by weight of the component (A) and 99.9-40 parts by weight of the component (B) in 100 parts by weight of the component (A) and the component (B) in total (col 11, ln 20-28).

Nakacho does not expressly disclose the phosphazene compound containing 80% by weight or more of cyclic trimers.

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Kao discloses a phosphazene compound containing more than about 80% by weight of cyclic trimers (col 3, ln 25) useful in flame retardant composition (col 1, ln 12-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the phosphazene compound containing more than about 80% by weight of cyclic trimers as taught by Kao with the phosphazene compound in the flame retardant composition taught by Nakacho because Kao teaches that the phosphazene compound containing more than about 80% by weight of cyclic trimers can be used in the flame retardant composition (col 1, ln 12-18) and one of ordinary skill would be able to substitute one known material for another to obtain predictable result.

Nakacho does not disclose the phosphazene compound having a difference of 40-100°C between the temperature at which weight reduction is 50% by weight and the temperature at which the weight reduction is 5% by weight when it is heated from room temperature to 600°C at a heating rate of 10°C/min in an inert gas atmosphere according to TGA, an acid value of not more than 1.0, a water content of not more than 1000 ppm measured at 150°C according to Karl Fischer's method, and the temperature at which the weight reduction of the phosphazene compound is 50% by weight is 320-460°C when it is heated from room temperature to 600°C at a heating rate of 10°C/min in an inert gas atmosphere according to TGA. However, Kao discloses a phosphazene compound containing more than about 80% by weight of cyclic trimers as claimed; therefore, the phosphazene compound of prior art is identical or substantially identical

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that set forth by applicant. Thus, phosphazene compound and the composition of prior art would possess the same properties as claimed. "Product of identical chemical composition can not have mutually exclusive properties". A chemical composition and its properties are inseparable. "Where the claimed and prior art products are identical or substantially identical in structure or composition, a prima facie case of either anticipation or obviousness has been established." *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 5, Nakacho discloses the flame retardant composition according to claim 1, wherein the metal M in the component (A-1) is at least one metal selected from the group consisting of V, Nb, Fe, Ni, Pd, Pt, Cu, Ag and Au (Nakacho, col 11, ln 60-61).

Regarding claim 6, Nakacho discloses the flame retardant composition according to claim 1, wherein the component (A-1) is at least one compound selected from the group consisting of iron oxide, nickel oxide, palladium oxide and copper oxide (Nakacho, col 11, ln 60-61).

Regarding claims 7-9, Nakacho discloses the flame retardant composition according to claim 1, the component (A-2) is triarylphosphines (Nakacho triphenyl phosphine - col 10, ln 66-67).

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Regarding claims 10-14, Nakacho discloses the flame retardant composition according to claim 1 which further comprises (C) an aromatic resin, wherein the component (C) is polyphenylene ether resin (Nakacho col 8, ln 33-53) and the weight ratio of the component (C) and the component (B) is $(C)/(B) = 95/5 - 5/95$ (Nakacho col 9, ln 9-14).

Regarding claims 15 and 16, Nakacho discloses a flame retardant resin composition which contains (a) a resin and (b) the flame retardant composition described in claim 1, which contains 1-1000 parts by weight of the component (b) based on 100 parts by weight of the component (a) (Nakacho col 11, ln 20-28).

Regarding claims 17 and 18, Nakacho discloses the flame retardant resin composition according to claim 15, wherein the component (a) comprises at least one thermoplastic resin selected from the group consisting of polycarbonate resins, polyphenylene ether resins, polyphenylene sulfide resins, polypropylene resins, polyethylene resins, polystyrene resins, ABS resins, polyalkylene terephthalate resins, polyamide resins, thermotropic liquid crystals and elastomer-containing polystyrenes (Nakacho col 8, ln 34-55) and the component (A-1) in the flame retardant composition which is the component (b) is iron oxide and/or copper oxide (Nakacho col 11, ln 60-61).

Regarding claim 19, Nakacho discloses the flame retardant resin composition according to claim 15, wherein the component (a) comprises at least one thermoplastic resin selected from the group consisting of polycarbonate resins, polyphenylene ether resins, polyphenylene sulfide resins, polypropylene resins, polyethylene resins, polystyrene resins, ABS resins, polyalkylene terephthalate resins, polyamide resins,

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thermotropic liquid crystals and elastomer-containing polystyrenes (Nakacho col 8, In 34-55) and the component (A-1) in the flame retardant composition which is the component (b) is at least one phosphine selected from triarylphosphines (Nakacho triphenyl phosphine - col 10, In 66-67).

Regarding claim 20, Nakacho discloses the flame retardant resin composition according to claim 15, wherein the component (a) comprises at least one hardening resin selected from the group consisting of unsaturated polyester resins, vinyl ester resins, diallyl phthalate resins, epoxy resins, cyanate resins, xylene resins, triazine resins, phenolic resins, urea resins, melamine resins, benzoguanamine resins, urethane resins, ketone resins, alkyd resins, furan resins, oxetane resins, styrylpyridine resins and synthetic rubbers (Nakacho col 8, In 56 to col 9, In 8)

Regarding claim 21, Nakacho discloses the flame retardant resin composition according to claim 15, wherein the component (a) is an epoxy resin (Nakacho col 8, In 61), and the component (A-1) in the flame retardant composition which is the component (b) is at least one oxide selected from nickel oxide, palladium oxide, iron oxide and copper oxide (Nakacho, col 11, In 60-61).

Regarding claim 22, Nakacho discloses the flame retardant resin composition according to claim 15, wherein the component (a) is an epoxy resin (Nakacho col 8, In 61), and the component (A-2) in the flame retardant composition which is the component (b) is at least one phosphine selected from triarylphosphines (Nakacho, triphenyl phosphine - col 10, In 66-67).

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Regarding claim 23, Nakacho discloses the flame retardant resin composition according to claim 15 or 16, wherein the component (a) is an epoxy resin, and the component (b) further comprises (C) an aromatic resin which is a polyphenylene ether resin (Nakacho col 8, ln 34-55). Nakacho does not disclose the polyphenylene ether resin having a number average molecular weight of 500-5000. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the polyphenylene ether resin having a number average molecular weight within the claimed range because one of ordinary skill would be able to carry out such selection depending on the application and the results are reasonably predictable.

Regarding claim 24, Nakacho discloses a molded article comprising the flame retardant resin composition according to claim 14 (Nakacho, col 5, ln 61-63).

Response to Arguments

5. Applicant's arguments been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haidung D. Nguyen whose telephone number is (571)270-5455. The examiner can normally be reached on M-Th: 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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